

Recombinant Human Cell Division Cycle 25 Homolog A (S. pombe), GST-tagged

Cat. No. CDC25A-1577H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Full-length recombinant human CDC25A was expressed in Sf9 insect cells using an N-terminal GST tag.
Species	Human
Source	Sf9 Cells
Description	CDC25A (also known as cell division cycle 25 homolog A) is a member of the CDC25 family of phosphatases that are required for progression from G1 to the S phase of the cell cycle. CDC25A can activate the cyclin-dependent kinase CDC2 (also known as CDK1) by removing two phosphate groups. CDC25A is specifically degraded in response to DNA damage, which prevents cells with chromosomal abnormalities from progressing through cell division. CDC25A overexpression is detected in human cancers and this may contribute to the tumorigenesis process. CDC25A is degraded by moderate heat shock and this degradation is protected by HSP90.
Applications	Phosphatase Assay; Western Blot
Molecular Weight	94 kDa
Expression System	Sf9 insect cells using baculovirus
Form	Recombinant protein stored in 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 10 mM glutathione, 0.1 mM EDTA, 0.25 mM DTT, 0.1 mM PMSF, 25 % glycerol.

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Specific Activity	31 nmol/min/mg
Purity	> 80 %
Concentration	0.1 ug/ul
Sequences	Full-length
Storage	Store product at -70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.
Pathways	Activation of ATR in response to replication stress; Cell Cycle Checkpoints; Cell cycle; Cyclin A/B1 associated events during G2/M transition; Cyclin B2 mediated events; Cyclin E associated events during G1/S transition; E2F transcription factor network; E2F-enabled inhibition of pre-replication complex formation; G1 to S cell cycle control; Integrated Breast Cancer Pathway; Cell Cycle, Mitotic; Progesterone-mediated oocyte maturation; TGF-beta Receptor Signaling Pathway; miRNAs involved in DDRCell Cycle Checkpoints; Cell Cycle, Mitotic

GENE INFORMATION

Gene Name	CDC25A cell division cycle 25 homolog A (S. pombe) [Homo sapiens]
Official Symbol	CDC25A
Synonyms	CDC25A; cell division cycle 25 homolog A (S. pombe); CDC25A2; cell division cycle 25A; M-phase inducer phosphatase 1; dual specificity phosphatase CDC25A; EC 3.1.3.48; Dual specificity phosphatase Cdc25A; cell division cycle 25 homolog A (S. cerevisiae)

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Gene ID	993
mRNA Refseq	NM_001789
Protein Refseq	NP_001780
MIM	116947
UniProt ID	P30304
Chromosome Location	3p21
Function	hydrolase activity; protein binding; protein tyrosine phosphatase activity
Protein CDC25A PDB 1c25.	